

EXHIBIT 3

**UNITED STATES DISTRICT COURT
IN THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

OPTIMUM IMAGING TECHNOLOGIES LLC,


Plaintiff,

v.

CANON INC.,

Defendant.

C.A. No. 2:19-cv-00246-JRG



**EXPERT REPORT OF WAYNE E. PRENTICE REGARDING INVALIDITY
OF UNITED STATES PATENT NOS. 7,612,805 & 8,451,339**

165. I understand that in the Claim Construction Order, the Court found that one of ordinary skill in the art would have an electrical engineering degree and three years of relevant experience. (Claim Construction Memorandum Opinion and Order, D.I. 88 at 5-6).

166. In reviewing the proposed levels of ordinary skill and the Court's claim construction order, I understand that the question of what qualifies as relevant experience remains unresolved. OIT's proposed relevant experience level relates only to "data processing," and is thus divorced from the claimed field of the inventions – digital imaging systems and methods. Canon's proposed relevant experience level calls for experience in digital camera design, which involves designing the system within the camera responsible for the processing of digital images, including designing how the image data flows throughout the components of the digital camera to reduce aberrations. Accordingly, in my opinion, Canon's proposed level of skill in the art is correct.

167. Under any of these definitions, I believe I would qualify as a person of at least ordinary skill in the art (a "POSA") to which the inventions of the '805 and '339 Patents are directed based on my qualifications and experience described above.

168. Further, regardless of which definition of a POSA ultimately gets applied, my opinions contained herein would not change.

XII. OVERVIEW OF THE STATE OF THE ART

A. State of the Art

169. The disputed patents describe the technology area as: "A system is disclosed for the automated correction of optical and digital aberrations in a digital imaging system." '805 Pat. at Abstract. Optimizing images has been a longtime pursuit in photography across various lens types. '805 Pat. at 1:36–48. As photography advanced, automated mechanisms were invented to

correct issues such as blurring. These automated processing means advanced further as microprocessors and sensors improved. '805 Pat. at 2:27–30.

170. The '805 Patent acknowledges that prior to the filing date it was known to “use [] software that automatically corrects” image issues, particularly for issues caused by imperfect imaging systems. '805 Pat. at 2:56–61 (discussing a Hasselblad camera with software that automatically corrects image issues); *see also* 6:32-42 (discussing post-production software programs that can emulate filters). Accordingly, the Asserted Patents specifically admit that the ability to use digital image processing to correct for optical imaging aberrations was well known as of the date of invention.

171. For example, the Asserted Patents specifically disclose Adobe Photoshop as a prior art image processing software capable of correcting aberrations through digital filtration. '805 Pat. at 6:32-42, 12:42-13:1. More specifically, Adobe Photoshop CS2 is an image processing application released in April 2005, that included built in functionality that provided for the correction of various aberrations. CANON0063026-28 (disclosing digital image processing capability to correct optical aberrations including barrel distortion, pincushion distortion, vignetting, and chromatic aberration). The manual for Photoshop CS2 discloses that the presence or degree of defects in the captured image would depend on certain characteristics of the camera at the time of image capture, e.g. focal length or f-stop used during image capture. CANON0063027. Accordingly, in correcting aberrations for a specific captured image using its Lens Correction filter, Photoshop CS2 accounts for the camera, lens, and focal length setting used to capture the image. CANON0063027-28.

172. In addition to Photoshop, the Asserted Patents specifically admit that other digital photo editing software was also ubiquitous as of the priority date. '805 Pat. at 6:32-42. DxO

Optics Pro 3.5, also released prior to the priority date of the Asserted Patents in 2005 (CANON0926807, CANON0926617), was another example of an image processing software that used digital image processing techniques for correcting aberrations. DxO Optics Pro 3.5 allowed for fully automatic processing of both digital camera raw data and JPEG images to automatically apply aberration correction functionality to a captured image accounting for the specific camera and lens combination used to capture the image. CANON0063668-73, CANON0063682; *see also* CANON0926617). DxO Optics Pro 3.5 allowed for batch processing of multiple images to correct aberrations as well. CANON0063690. Further, in addition to accounting for the camera and lens used to capture the image, DxO Optics Pro 3.5's aberration correction functionality also accounted for the taking conditions during the capture of the image (focal length, aperture, etc.). CANON0063732.

173. Accordingly, as of the priority date of the Asserted Patents, it was well known in the art to use digital image processing to correct for optical imaging aberrations, and to automatically adjust the correction techniques to account for image capture conditions. The Asserted Patents simply claim systems and methods that take these known image correction techniques and automate them in house in the camera. In some cases the claimed systems and methods also require implementing known special effects in camera as well. These features were well-known in the prior art, as discussed below.

174. More specifically, as of the priority date, it was well known in the art that publicly available digital cameras included in-camera aberration correction technology. For example, as discussed in greater detail below, Canon released digital still and video cameras including in-camera aberration correction technology dating back to 2004.

175. The PowerShot SD300 Digital ELPH and PowerShot SD200 Digital ELPH were digital cameras sold in the United States dating back at least to October and September 2004, respectively. (*See, e.g.*, PowerShot Sales Sheet at CUSA0193550; Oct. 16, 2019 Dec. of Ana Tavares). The PowerShot SD300 Digital ELPH and PowerShot SD200 Digital ELPH were digital cameras with built in peripheral illumination correction features. (*See, e.g.*, Oct. 16, 2019 Dec. of Hironori Aokage at ¶¶ 5-6; CANON0114969).

176. The Canon ZR80/ZR85/ZR90 were digital video cameras sold in the United States dating back at least to January 2004. (*See, e.g.*, ZR80/85/90 Sales Sheet at CUSA0193549). As discussed in detail below, the Canon ZR80/ZR85/ZR90 digital video cameras included built in diffraction correction functionality, that varied the degree of diffraction correction based upon the aperture, zoom position of the lens, and camera mode setting at the time of image capture.

177. In fact, I understand that OIT accused of infringement several models of Canon digital cameras with built-in aberration correction functionality that were publicly available for sale prior to the priority date of the Asserted Patents. These camera models include the: ZR10, ZR20, ZR25MC, ZR45MC, ZR50MC, ZR60, ZR65MC, ZR80, ZR85, ZR90, ZR100, ZR200/ZR300, XL-1, XL-1s, XL-2, GL2. (Canon's Invalidity Contentions and Disclosures Under Patent Rules 3-3 and 3-4 at 6-7).

178. Moreover, in addition to Canon, other digital camera manufacturers also sold digital cameras with built-in aberration correction functionality prior to the priority date of the Asserted Patents. For example, the Kodak EasyShare V570 was publicly available for sale at least as of January 2006. (CANON0926808-18). The Kodak EasyShare V570 included in camera aberration correction functionality to correct distortion aberrations and red-eye. CANON0063483, CANON0063856. Additionally, Olympus sold the Olympus EVOLT E-300

digital camera, which was publicly available for sale at least as of December 2004

(CANON0926805). The Olympus E-300 included in camera aberration correction functionality that automatically corrected for distortions and aberrations based on lens data.

(CANON0926805).

179. This section will provide a description of the technology as it was known as of the priority date along with some background information to provide context.

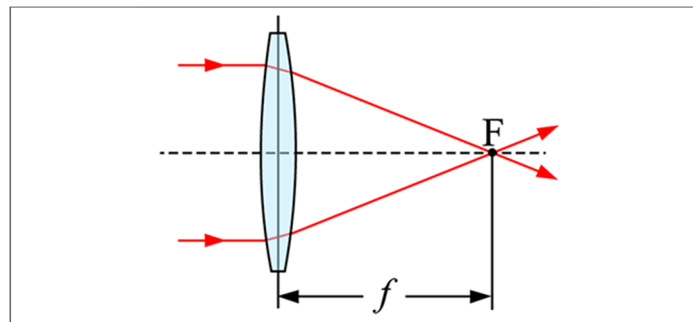
1. Digital Camera Basics

180. This section describes the basic operation of a digital imaging system, also known as a digital camera. A digital camera can be thought of as a system with three parts: (1) Lens; (2) Sensor; (3) Image Processing Subsystem.

a. Lens Basics

181. A digital camera's lens casts an image of the scene upon the sensor. The lens may be an integral part of the camera or interchangeable. Moreover, lenses are broadly classified as into two types of lenses—lenses that have a fixed field of view (FOV), and lenses that have a variable FOV. The former is called a prime or fixed focus lens, the latter is called a zoom lens.

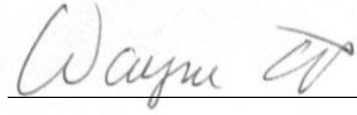
182. A camera lens design represents a compromise of a number of competing goals. Each final design represents a minimization of cost, weight, size while limiting image quality loss.



I declare under the penalty of perjury that the foregoing is true and correct.

Dated: September 28, 2020

By:

A handwritten signature in dark ink, appearing to read "Wayne E. Prentice", is written over a horizontal line.

Wayne E. Prentice